



Contents

Acknowledgements	6
Introduction	7
1 Kidney basics	8
<i>Patient and carer information: kidney basics</i>	9
<i>Patient and carer information: the kidneys and the circulation</i>	10
What is CKD and is it important?	10
<i>Chronic</i>	11
<i>Kidney</i>	11
<i>Disease</i>	11
2 Screening and diagnosis of CKD	12
How is CKD diagnosed?	12
<i>eGFR</i>	13
<i>Proteinuria</i>	14
<i>Haematuria</i>	16
<i>Screening for haematuria</i>	17
Imaging	18
<i>Ultrasound</i>	18
<i>Other types of imaging</i>	20
3 Classification of CKD	21
Examples of classification of CKD	22
4 Epidemiology of CKD	24
Age	25
Mortality rate	26
Ethnicity	27
Deprivation	28
5 Management of CKD	29
Management of stages 1–3	29
Management of stages 4–5	30

Referral to a specialist	31
<i>Immediate referral to a nephrologist (same day)</i>	31
<i>Urgent referral to a nephrologist (within a week)</i>	31
<i>Urgent referral to a urologist</i>	31
<i>Referral to a haematuria clinic</i>	32
<i>Other indications for referral (within a month)</i>	32
<i>Information to include with the referral to a nephrologist</i>	33
Management of hypertension	33
<i>Patient and carer information: management of CKD</i>	34
<i>Malignant hypertension</i>	35
<i>The safe use of ACEI/ARB</i>	36
<i>Patient and carer information: high blood pressure</i>	37
Management of cholesterol and blood lipids	38
<i>Patient and carer information: cholesterol</i>	39
Management of medicines	41
<i>Over-the-counter medications and alternative therapies</i>	42
6 Kidney diseases	44
Hypertensive nephrosclerosis	44
Diabetes	44
<i>Patient and carer information: diabetes</i>	45
Reflux nephropathy	46
Renal cysts and polycystic kidneys	47
Renal artery stenosis	48
Glomerular disease	49
<i>Rapidly progressing glomerulonephritis</i>	50
<i>IgA nephropathy</i>	50
<i>Membranous nephropathy</i>	51
<i>Focal and segmental glomerulosclerosis</i>	51
<i>Mesangiocapillary glomerulonephritis</i>	52
Nephrotic syndrome	52
<i>Minimal change nephropathy</i>	53
Myeloma	54
Amyloidosis	55
Systemic lupus erythematosus	55
Urine infection	56
<i>Patient and carer information: urine infections</i>	57
Heart failure	58
<i>Patient and carer information: heart failure</i>	59

7 Complications of CKD	60
Anaemia	60
<i>Patient and carer information: anaemia</i>	61
Calcium and bones	62
<i>Patient and carer information: calcium and bones</i>	63
Hyperkalaemia	64
Loin pain	65
Gout	66
Depression	66
8 Living with CKD	68
Diet and fluid intake	68
<i>Diet</i>	68
<i>Fluid intake</i>	69
<i>Alcohol intake</i>	70
Smoking	70
Exercise	70
Work	71
Travel	71
Insurance	72
Sex	72
Pregnancy	73
<i>Getting pregnant</i>	73
<i>Being pregnant</i>	74
Children and inherited CKD	74
Life expectancy	75
<i>Patient and carer information: CKD and life expectancy</i>	75
End-of-life care	76
9 The CKD clinic	77
Referral for CKD stage 3	77
Referral for CKD stage 4 and heart failure	78
Referral for CKD stage 5	79
Referral for microscopic haematuria	80
Referral for proteinuria	80
Referral for diabetes and reduced eGFR	82
Referral for uncontrolled hypertension in someone with vascular disease	82

Appendix 1	
NICE guidance relevant to CKD	84
The National Service Framework	84
Appendix 2	
GP care and the Quality and Outcomes Framework	85
Glossary	87
Resources	90
Leaflets and books	90
Patients' associations	90
Key websites	91
References	92
<i>General issues in primary care</i>	92
<i>Epidemiology</i>	93
<i>Impact of interventions</i>	93
Other titles	94
Priority order form	96

ACKNOWLEDGEMENTS

I would like to thank all those who have helped me with an understanding of the issues surrounding CKD and have helped with the preparation of this book. Dr Charlie Tomson and Dr Andy Stein have helped directly, and Dr Daniel Zehnder and Neil Raymond helped me learn a little about epidemiology.